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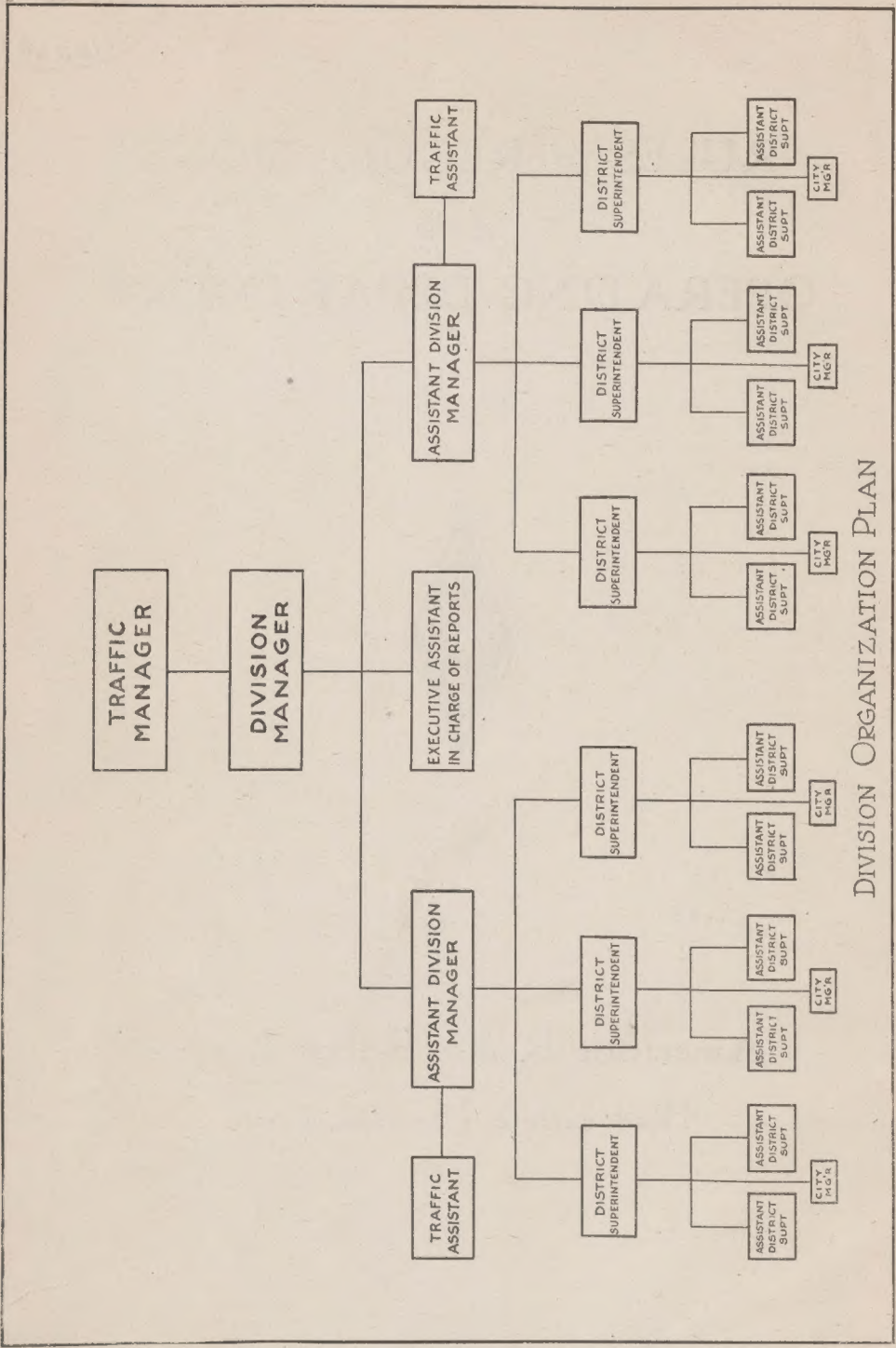
# RULES & REGULATIONS *of the* OPERATING DEPARTMENT



American Radio Relay League  
Headquarters, Hartford, Conn.

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# A. R. R. L. Operating Department Rules and Regulations

For The Handling of Relay Message Traffic



## PREFACE

FOR the benefit of those good amateurs who desire to carry on communication and relay work with the good form that represents good operation, we present these simple rules and regulations.

In the many years of amateur wireless we have observed that some amateurs follow a given form in handling message traffic while others handle traffic haphazardly and carelessly without regard to clean-cut operation and despatch. This condition is true not because these haphazard operators do not want to do better work but because they are not familiar with a good standardized form. To these men we express the earnest request that they fall in line with the majority of good relay operators by following the forms given in these pages.

Two big purposes are covered. First, the new men in the fascinating sport of relaying are posted and given an increased understanding of how relay traffic is handled; second, a standardized form thus given will be followed by every good wireless amateur operator and confusion and misunderstanding will be reduced to a minimum.

These pages are not filled with the ideas of any one man or individual. For many months these things have been discussed with amateurs all over the United States and Canada and were approved at the First National A.R.R.L. Convention in

Chicago, and we sincerely believe the best judgment of the great majority of amateur radio operators is expressed thereby.

No one is bound to follow these forms. We merely ask your consideration and cooperation in carrying out a plan for the good of our game.

With the coming of high class radio-phone broadcasting, we must heed the demand of citizens who desire to listen to such broadcasts. Consideration must be accorded those who desire the broadcast service and our relay work will find its periods confined to the later hours of the night. We must not encroach upon the rights of others with our relay message traffic. There were times when we could start our relay message traffic at any hour of the day or night but with the coming of thousands of new men we had to adopt working schedules whereby each and every one was given a chance to carry on radio communication. Just so with the hundreds of thousands of citizens who find their radio pleasure in listening to concerts, lectures, etc.—we must not interfere with their sport and pleasure.

As we advance we expect to find many ways by which we may improve our traffic handling, and suggestions and criticisms will be welcomed.

F. H. Schnell,  
*Traffic Manager.*

## I—HOURS OF OPERATION FOR HANDLING TRAFFIC

(a) In general, long distance relay traffic shall be carried on after 10:00 P.M. local standard time and until 6:00 A.M. the following day.

(b) Amateurs in many of the larger cities and clubs, and in some cases sections of a state or whole states, are governed by executive councils which have adopted relay traffic schedules that are best suited to their general conditions. These schedules permit local communication at certain hours and long distance communication at other hours. Where amateurs come under the jurisdiction of these councils, the time

schedule should be strictly observed by all members of the A.R.R.L. whether local or long distance to the territory thus governed.

## II—MESSAGE FORM AND METHOD OF NUMBERING

Every message shall contain the following component parts in the order given:

- (a) Number of message
- (b) Office of origin
- (c) Date and filing time
- (d) Check
- (e) Address
- (f) Text
- (2) Signature

(a) Every transmitted message shall bear a number. Messages sent to any one



station during a period of one operating day shall be numbered consecutively. (Example: on the first of the month 5ZA sends four messages to 6ZK. These messages shall be numbered consecutively from Nr. 1 to Nr. 4. On the fourth of the month 5ZA sends six messages to 6ZK. These shall be numbered consecutively from Nr. 1 to Nr. 6). At the beginning of a new operating day a new series shall be started beginning with Nr. 1. To insure correct numbering of messages it will be necessary for each station to keep at hand a list of stations with which message traffic is handled and promptly enter each message as sent or received. This list or an abstract of same showing number of messages sent and received should be forwarded monthly to the District Superintendent. Operating months shall start at 12:01 A.M. on the 20th of each calendar month and shall end at midnight on the 19th of each calendar month. Division Managers may modify this rule to suit their local conditions in collating the data for their monthly reports, which must be in the Hartford office not later than the first of the following month.

(b) "Office of origin" refers to the city or town or village in which a message originates. Messages shall not be accepted or acknowledged for when the office of origin is not given completely or when it is garbled beyond identification.

(c) Every message accepted for transmission shall bear a date and filing time. The filing date of every message shall be transmitted. Transmission of filing time is not essential. Filing time shall be transmitted on test messages where time is a factor or at the request of the sender.

(d) "Check" denotes the number of words in a message, counting each word of the text only. Each initial shall be counted as one word. A group of five figures or less shall be counted as one word. In the transmission of a message the check shall be sent. To verify check, the first letter or figure of each word is transmitted.

(e) The address of a message consists of the complete name of the addressee, street and number, radio call or telephone number, city and state. Messages must bear complete address sufficient for delivery by mail in case of delay by radio. The address is followed by the double break (—...—) and precedes the text of the message.

(f) The text of a message consists of the words in the body of the message. The text follows the double break (—...—) after the address, and is followed by the double break (—...—) which precedes the signature.

(g) The signature of a message is usually the name of the person filing or sending the message and follows the double

break (—...—) after the text. Every message must bear a signature.

### III—ROUTING, COUNTING, AND DELIVERY OF MESSAGES

**ROUTING**—Messages shall be routed over the shortest distances to insure reliable communication. Probably the greatest delay in the delivery of messages is caused by insufficient or improper routing. Know your geography. Messages shall be relayed to stations in the direct line toward destination to avoid delay in delivery.

**COUNTING**—A transmitted message is a message that has been transmitted correctly and for which proper acknowledgment has been received, and counts as one message handled in A.R.R.L. traffic reports. A received message is a message that has been received correctly and for which proper acknowledgment has been given, and counts as one. A relay message is a message that has been received, again transmitted to the proper station and for which proper acknowledgment has been received, and counts as one received and one sent, total two.

**DELIVERY**—A message received for further relay shall be transmitted to the next station in line within forty-eight (48) hours after receipt. If it cannot be relayed by radio within forty-eight (48) hours, it should be mailed direct to the addressee without further delay. When a message is received at a station in the city of destination, it shall be delivered immediately by wire telephone, messenger, in person, or by mail.

### IV—OPERATING PROCEDURE

**GENERAL**—Listen at least five minutes before using your transmitter for any purpose whatever, to see that all nearby stations are clear. Use minimum power for reliable communication.

**CALLING AND ESTABLISHING COMMUNICATION**—In calling a station the following form shall be used: KA (—...—), followed by the call letters of the station called transmitted three times, DE (—...—), followed by the call letters of the station calling transmitted three times. (Example: —...— 5ZA 5ZA 5ZA —...— 6ZK 6ZK 6ZK) Failing to "raise" a station after three such attempts at intervals of two minutes, do not call that station again until after a period of at least fifteen (15) minutes has elapsed.

The station called shall answer in the following manner: KA (—...—), followed by the call letters of the corresponding station transmitted three times, DE (—...—), its own call repeated three times and the signal K (—...—) (Example: —...— 6ZK 6ZK 6ZK —...— 5ZA 5ZA 5ZA —...—).

Messages shall be handled according to the following procedure, in which a com-



plete message is used as an example in the exchange of communication between transmitter and receiver from start to finish.

(Office (Date and  
(No.) of origin) filing time) (Check)  
1 Sunnyvale Calif Sept 5th 9:40 P 19  
(Address)  
Louis Falconi  
Radio 5ZA  
Roswell N M

(Text)

The ARRL transcons made amateur radio history and I will be on the job for the tests in January

(Signature)

A. E. Bessey.

(6ZK calls 5ZA) —.—.— 5ZA 5ZA 5ZA  
—.—.— 6ZK 6ZK 6ZK (5ZA answers 6ZK)  
—.—.— 6ZK 6ZK 6ZK —.—.— 5ZA  
5ZA 5ZA —.—.— (6ZK transmits the message)  
—.—.— 5ZA 5ZA 5ZA —.—.—  
6ZK 6ZK 6ZK —.—.— 1 Sunnyvale  
Calif 5 ck 19 (address) —.—.— (text)  
—.—.— (signature) —.—.— 6ZK. (5ZA  
acknowledges) —.—.— 6ZK —.—.— 5ZA 1  
—.—.— (6ZK has nothing more for  
5ZA and concludes his transmission)  
—.—.— 6ZK. (After which 5ZA does  
the same) —.—.— 5ZA. This designates  
that both stations are clear.

**REPEATING**—In cases where parts of a message are not received, the interrogation (—.—.—) shall be used between the last word correctly received and the first word where the message was picked up after the interruption. Receiving operators shall say how the message shall be transmitted, whether words once or twice. Messages shall be transmitted as many as three times at the request of the receiving operator. Failing to make complete copy after three such attempts, the receiving operator shall cancel the transmission with the signal "QSK". The transmitter shall attempt to relay the message via some other station in the direct line.

## V—GENERAL

Adhere strictly to the United States Radio Communication Laws, especially in regard to wave length and decrement and power. When you hear a distress signal stop transmitting immediately so as not to cause interference. Use the international abbreviations whenever you can. Avoid unnecessary communication which causes interference. Assist your radio club in any way that you can to promote the radio art and improve relay work. Keep a complete log of every transmission that you make and every station that you hear, with the exact time and date.

Do not "hog" the air and get the name of being an "ether hog". Be considerate and give the other fellow a chance. Do not permit an inexperienced person to operate your station without supervision.

## VI—OPERATING DEPT. PERSONNEL

The Operating Department divides the United States and Canada into eighteen divisions as shown on page 6. Each one of these divisions is divided into sections and further into districts. Division Managers divide their division into sections as best suited to their particular needs and place these sections under the supervision of Assistant Division Managers. Assistant Division Managers divide their sections into districts, with the approval of the Division Manager, and the districts are supervised by District Superintendents who have Assistant District Superintendents.

**DIVISION MANAGERS**—Division Managers are in charge of their particular divisions and it is their duty to appoint assistants, selecting their personnel from the ranks of the A.R.R.L. and choosing men who will meet with the approval of the majority of amateurs in that section or district. The Division Manager may have as many assistants as he deems necessary to carry on the work of the A.R.R.L. with the greatest ease and efficiency. All division appointments are made directly by the Division Manager upon recommendation of his assistants. The Division Manager receives detailed monthly reports from his assistants, from which he prepares and forwards a summarized report to headquarters office not later than the first day of every calendar month. Division Managers and their assistants shall co-operate with other divisions in relay traffic and other work of the A.R.R.L.

**ASSISTANT DIVISION MANAGERS**—The Assistant Division Managers carry out the instructions of the Division Manager governing their sections. Assistant Division Managers shall recommend for appointment men who are capable of handling the office of District Superintendent. It is the duty of the Assistant Division Manager to gather his monthly reports from his various District Superintendents on the date determined by the Division Manager, and therefrom compile a comprehensive report covering his section, and forward same to the Division Manager.

**DISTRICT SUPERINTENDENTS**—The successful functioning of our Operating Department depends upon the selection of good District Superintendents and Assistant District Superintendents, who should be in direct contact with each and every station in their respective districts. It is the District Superintendents and their assistants who gather the monthly reports from the individual stations and report therefrom on their respective territories to the Assistant Division Managers. District Superintendents should know just what kind of work is done and can be done by the Official Relay Stations in their districts.

**CITY MANAGERS**—The City Manager



THE AMERICAN RADIO RELAY LEAGUE  
HARTFORD CONN.  
RADIOGRAM  
RADIO STATION 112  
276 N. DILLERY  
PHONE 4-4372

Received 2140  
No. 2 401  
FROM STN. 401  
LOCATED AT Swanton, Ga.  
DATE 12-15-21  
TIME 9:47 P.M.  
CHECK 11  
OPERATION 82

FROM Hartford, Conn.  
TO P. T. Bennett  
3600 Carl St.  
Dallas Texas

DATE 15th  
VIA

This will acknowledge receipt of nine subscriptions to QST many thanks  
Schneil

Sent  
No. 2 401  
TO STN. 401  
LOCATED AT Swanton, Ga.  
DATE 12-15-21  
TIME 10:43 P.M.  
CHECK 11  
OPERATION 82

NOTICE TO ADDRESSEE: The station delivering you this message will be pleased to forward your reply without charge.

SPECIMEN "A"

THE AMERICAN RADIO RELAY LEAGUE  
HARTFORD CONN.  
RADIOGRAM  
RADIO STATION 52L  
1301 E. HIGHLAND  
PHONE

Received  
No. 1 49L  
FROM STN. 49L  
LOCATED AT Savannah, Ga.  
DATE 12-15-21  
TIME 9:52 P.M.  
CHECK 11  
OPERATION 81

FROM Hartford, Conn.  
TO P. T. Bennett  
3600 Carl St.  
Dallas Texas

DATE 15th  
VIA

This will acknowledge receipt of nine subscriptions to QST many thanks  
Schneil

Sent  
No. 1 49L  
TO STN. 49L  
LOCATED AT Savannah, Ga.  
DATE 12-15-21  
TIME 10:14 P.M.  
CHECK 11  
OPERATION 81

NOTICE TO ADDRESSEE: The station delivering you this message will be pleased to forward your reply without charge.

SPECIMEN "C"

THE AMERICAN RADIO RELAY LEAGUE  
HARTFORD CONN.  
RADIOGRAM  
RADIO STATION 40L  
1223 E. DUFFY  
PHONE

Received  
No. 2 143  
FROM STN. 143  
LOCATED AT Hartford, Conn.  
DATE 12-15-21  
TIME 10:43 P.M.  
CHECK 11  
OPERATION PH

FROM Hartford, Conn.  
TO P. T. Bennett  
3600 Carl St.  
Dallas Texas

DATE 15th  
VIA

This will acknowledge receipt of nine subscriptions to QST many thanks  
Schneil

Sent  
No. 2 143  
TO STN. 143  
LOCATED AT Hartford, Conn.  
DATE 12-15-21  
TIME 10:52 P.M.  
CHECK 11  
OPERATION PH

NOTICE TO ADDRESSEE: The station delivering you this message will be pleased to forward your reply without charge.

SPECIMEN "B"

THE AMERICAN RADIO RELAY LEAGUE  
HARTFORD CONN.  
RADIOGRAM  
RADIO STATION 52Z  
1101 E. HIGHLAND  
PHONE

Received  
No. 4 52Z  
FROM STN. 52Z  
LOCATED AT Little Rock, Ark.  
DATE 12-15-21  
TIME 10:14 P.M.  
CHECK 11  
OPERATION PC

FROM Hartford, Conn.  
TO P. T. Bennett  
3600 Carl St.  
Dallas Texas

DATE 15th  
VIA

This will acknowledge receipt of nine subscriptions to QST many thanks  
Schneil

Sent  
No. 4 52Z  
TO STN. 52Z  
LOCATED AT Little Rock, Ark.  
DATE 12-15-21  
TIME 9:50 P.M.  
CHECK 11  
OPERATION PC

NOTICE TO ADDRESSEE: The station delivering you this message will be pleased to forward your reply without charge.

SPECIMEN "D"



is usually in charge of radio activity in a large city or town where there are many amateurs. It is the duty of the City Manager to help organize radio clubs and promote harmony. He should be a man familiar with local co-operative plans which permit the operation of all classes of stations without undue interference. He is charged with the duty of seeing that every radio amateur of any class is given due consideration in all radio matters, traffic rules, and regulations.

### VII—QUIET HOURS

With the view in mind of establishing new long distance records by amateur radio, the A.R.R.L. has adopted a schedule of "QUIET HOURS", dividing the United States and Canada into three sections as shown on page 6. The scheme is that at certain hours on certain nights one section will remain absolutely quiet and listen for long distance stations in other parts of the country.

The time periods for listening in each section are as follows, in Eastern Standard Time:

*Section A will observe Quiet Hours every*

*Tuesday 12:01 A.M. to 1:00 A.M.*  
*Thursday 1:00 A.M. to 2:00 A.M.*  
*Saturday 1:00 A.M. to 2:00 A.M.*

*Section B will observe Quiet Hours*

*Tuesday 1:00 A.M. to 2:00 A.M.*  
*Thursday 12:01 A.M. to 1:00 A.M.*  
*Saturday 1:00 A.M. to 2:00 A.M.*

*Section C will observe Quiet Hours*

*Tuesday 1:00 A.M. to 2:00 A.M.*  
*Thursday 1:00 A.M. to 2:00 A.M.*  
*Saturday 12:01 A.M. to 1:00 A.M.*

No record is authentic unless it has been verified and for that purpose each division has a committee known as the "DX Verification Committee" whose duty it is to verify all claims for long distance transmission or reception. When claim for long distance reception or transmission is made the party wishing to establish the record should send all his information to the Traffic Manager at Hartford who will make complete investigation and determine whether or not such claim for long distance can be verified. The Traffic Manager forwards such claims to the Division Managers in whose divisions such reception and transmission is made. The Division Managers turn the information over to their DX Verification Committee with instructions to make a complete and thorough investigation and report. Then the DX Verification Committees secure the logs from the stations interested and making the claim and determine whether or not the time of transmission, and reception coincide, and other details that are necessary. Always keep a log at your station. It may be valuable some day.

### VIII—RADIO COMMUNICATION LAWS

Every amateur should have a copy of the Radio Communication Laws of the United States, which can be had by sending fifteen cents (not in stamps) to the Superintendent of Documents, Government Printing Office, Washington, D. C. We are governed by the present laws and when the Department of Commerce institutes new regulations, the amateur shall be governed thereby. A few paragraphs of importance to the amateur are given herewith.

Paragraph 65, Class 6. General amateur stations are restricted to a transmitting wave length not exceeding 200 meters and a transformer input not exceeding 1 kilowatt.

Paragraph 81. Apparatus for radio communication on land within the jurisdiction of the United States (excluding the Philippine Islands and excluding apparatus of the Government of the United States) must be licensed if—(a) the apparatus is a means of commercial intercourse among the several states or with foreign nations; or (b) the apparatus transmits radiograms or signals the effect of which at any time extends beyond the State; or (c) the apparatus interferes with the receipt of messages in any State from beyond such State.

Paragraph 83. Licenses can be issued to clubs if they are incorporated or if a member will accept the responsibility for the operation of the apparatus, carrying with it the possibility of being penalized for infraction of the laws.

Paragraph 84. Applications for station licenses of all classes should be addressed to the United States Radio Inspector for the district in which the station is located, who will forward the necessary blank forms and information.

Paragraph 92. All persons are warned that it is unlawful to operate stations after licenses have expired unless application for renewal has been properly made.

### IX—A.R.R.L. DIVISIONS

NEW ENGLAND DIVISION includes the states of Maine, Vermont, New Hampshire, Massachusetts, Rhode Island, and Connecticut.

ATLANTIC DIVISION: New York, Pennsylvania, New Jersey, Maryland, Delaware, and the District of Columbia.

ROANOKE DIVISION: Virginia, West Virginia, and North Carolina.

EAST GULF DIVISION: South Carolina, Georgia, Alabama, and Florida.

DELTA DIVISION: Arkansas, Tennessee, Mississippi, and Louisiana.

CENTRAL DIVISION: Wisconsin, Ohio, Michigan, Illinois, Indiana, and Kentucky.

DAKOTA DIVISION: North Dakota, South Dakota, and Minnesota.

MIDWEST DIVISION: Iowa, Missouri, Nebraska, and Kansas.





3 9080 02467 4977

**WEST GULF DIVISION:** Oklahoma, Texas, and New Mexico.

**ROCKY MOUNTAIN DIVISION:** Utah, Wyoming, and Colorado.

**NORTHWESTERN DIVISION:** Montana, Idaho, Washington, and Oregon.

**PACIFIC DIVISION:** Arizona, Nevada, and California.

**VANCOUVER DIVISION:** Provinces of Alberta and British Columbia.

**ALASKAN DIVISION:** Territory of Alaska.

**WINNIPEG DIVISION:** Provinces of Saskatchewan and Manitoba.

**ONTARIO DIVISION:** Province of Ontario.

**QUEBEC DIVISION:** Province of Quebec.

**MARITIME DIVISION:** Provinces of New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland.

American working Canadian uses the interval AA (—.—.)

Canadian working Canadian uses the interval V (...—)

Canadian working American uses the interval FM (...— ——)

#### ADDENDUM—SPECIMEN MESSAGES

Study of the specimen messages on page 4 will give a clear understanding of the construction of a message and its handling.

Specimen "A" shows that a message was filed at 1AW at 9:47 P.M. on the 15th of December. Counting the words in the text, the check shows 11 words. It is further shown that this message was the second one that was transmitted by 1AW to 4GL on that date and that the time sent was 10:43 P.M. The operator was "KB."

Specimen "B" shows how this message



#### X-INTERNATIONAL COMMUNICATION

Much relay traffic is handled between the American and Canadian amateurs, and in some cases the American call letters have their counterpart in Canadian call letters. If we all use the same "DE" interval (—.. .) confusion will result. After many months trial we have found that successful communication between American and Canadian amateurs, as far as recognizing call letters is concerned, can be carried on by using the following intervals.

American working American uses the interval DE (—.. .)

would look after it had been received at 4GL and further transmitted to 5ZL. The check remains the same but 4GL found that it was his first one to 5ZL.

Specimen "C" shows practically the same thing that is shown on specimen "B" except that the time has changed since there is a difference of one hour between Eastern Standard Time and Central Standard Time.

Specimen "D" shows that the message has reached its destination and that it was DELIVERED in person by the operator of 5ZC. It was the fourth message that 5ZL sent to 5ZC, as is shown in the number in the prefix, 4.